

REMARKS

Claims 2, 3, 10, 14, 15 and 16 are canceled. Claims 1, 4, 6, 11, 13 and 17 have been amended. Claims 1, 4-9, 11-13 and 17 remain in the application. Support for the amendments to the claims is identified herein. No new matter has been added. This application has been carefully considered in connection with the Examiner's Action. Reconsideration, withdrawal of the final action, and allowance of the application, as amended, is respectfully requested.

Rejection under 35 U.S.C. §102

Claim 1 recites a method of tracking an instrument that is inserted into the body of a patient, the method comprising the steps of:

- a) detection of a movement signal which represents movement phases of a periodic internal movement of the body, wherein the movement signal comprises both an electrocardiogram movement signal and a breathing movement signal;
- b) generation of 2D images of a body volume of interest, and storage thereof in an image database together with associated imaging parameters and an associated movement phase;
- c) measurement of a spatial position of the instrument;
- d) selection of at least one 2D image from the image database, wherein the at least one selected 2D image corresponds in terms of its associated movement phase to the movement phase belonging to the measured spatial position of the instrument;
- e) determination of the position of the instrument on the at least one selected 2D image, wherein determining the position of the instrument on the at least one selected 2D image includes using interpolation to calculate a superposed position of the instrument on the 2D image, and wherein determining further includes compensating for a breathing-induced movement of a given body part within the body volume of interest based on a measured breathing position using a movement model of the body part; and
- f) superposing the determined position of the instrument on the at least one selected 2D image.

Support for the amendment to claim 1 (as well as for amendment to claims 4, 11 and 13) can be found in the specification on at least page 3, lines 6-10 and 17-24; and page 8, lines 4-14 of the application as originally filed.

Claims 1-17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Strommer et al. (US2002/0049375 A1). With respect to claims 2, 3, 10, 14, 15 and 16, the same have been canceled herein, thus rendering the rejection thereof moot. With respect to claim 1, Applicants respectfully traverse this rejection for at least the following reasons.

The PTO provides in MPEP § 2131 that

"[t]o anticipate a claim, the reference must teach every element of the claim...."

Therefore, with respect to claim 1 as currently amended, to sustain this rejection the **Strommer et al.** reference must contain all of the above claimed elements of the respective claims. However, contrary to the examiner's position that all elements are disclosed in the **Strommer et al.** reference, the latter reference does not disclose "... detection of a movement signal which represents movement phases ... [and] comprises *both* an electrocardiogram movement signal and a breathing movement signal ... [and] determination of the *position* of the instrument *on the ... selected 2D image*, wherein determining the *position* of the instrument *on the ... selected 2D image* includes using *interpolation* to calculate a *superposed position* of the instrument on the *2D image*, and wherein determining further includes *compensating* for a *breathing-induced movement* of a given body part ... based on a measured breathing position using a movement model of the body part ..." as is claimed in claim 1. Therefore, the rejection is not supported by the **Strommer et al.** reference and should be withdrawn.

Accordingly, claim 1 is allowable and an early formal notice thereof is requested.

Dependent claims 4-9 depend from and further limit allowable independent claim 1 and therefore are allowable as well. Withdrawal of the rejection is respectfully requested.

Claim 11 has been amended in a manner similar to that of amended claim 1. For at least the same reasons as presented with respect to claim 1 above, claim 11 is believed prima facie allowable. Dependent claim 12 depends from and further limits allowable independent claim 11 and therefore is allowable as well. Accordingly, withdrawal of the rejection and an early formal notice of allowability is respectfully requested.

Claim 13 has been amended in a manner similar to that of amended claim 1. For at least the same reasons as presented with respect to claim 1 above, claim 13 is believed prima facie allowable. Dependent claim 17 depends from and further limits allowable independent claim 13 and therefore is allowable as well. Accordingly, withdrawal of the rejection and an early formal notice of allowability is respectfully requested.

Conclusion

Except as indicated herein, the claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or a continuation application.

It is clear from all of the foregoing that independent claims 1, 11 and 13 are in condition for allowance. Dependent claims 4-9 depend from allowable independent claim 1, and are thus also allowable. Dependent claim 12 depends from allowable

independent claim 11, and thus is also allowable. Dependent claim 17 depends from allowable independent claim 13, and thus is also allowable.

Amendments herein are fully supported by the original specification and drawings as discussed herein; therefore, no new matter is introduced. Issuance of an early formal notice of allowance of claims 1, 4-9, 11-13 and 17 is requested.

Respectfully submitted,

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